Project Use Case Scenarios #2 – AUTONOMOUS DRONE RACING

1. Aneri Hiren Desai, RL Model and Gazebo Simulation ,anerid@uci.edu
2. Derek Tran, Drone Management and AI Camera derekt5@uci.edu
3. Isaiah Cabugos, Control Systems and RL Model icabugos@uci.edu
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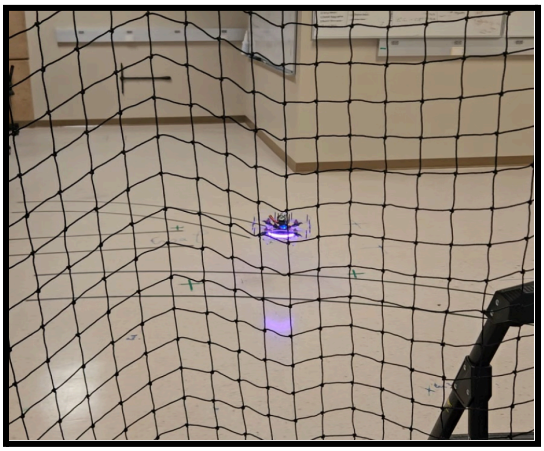
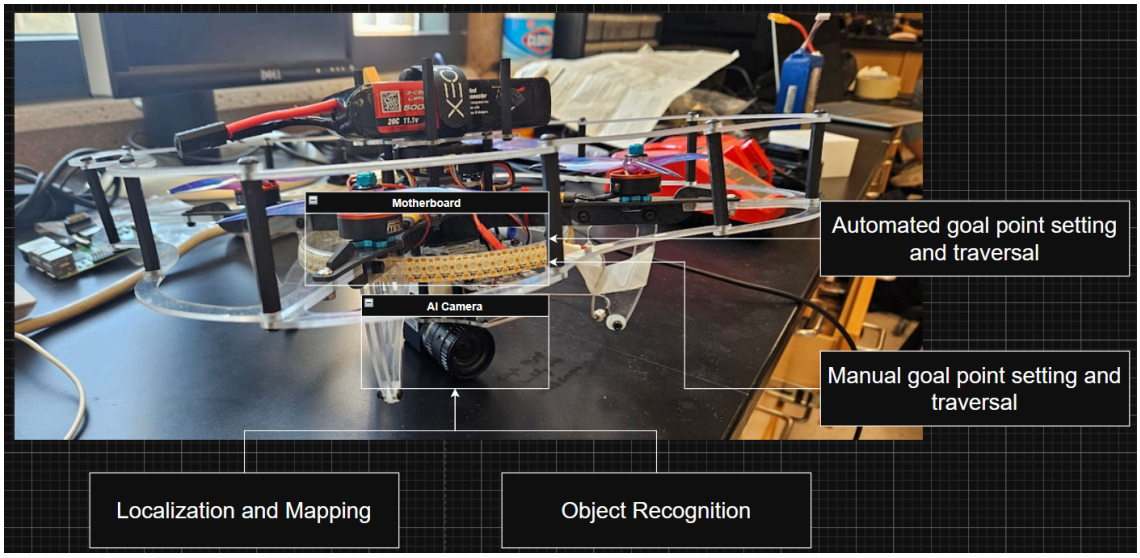
5. Rohankumar Barouliya, SLAM and AI Camera rbarouli@uci.edu

Updated Visual Representation of Project



Automated Flight Test

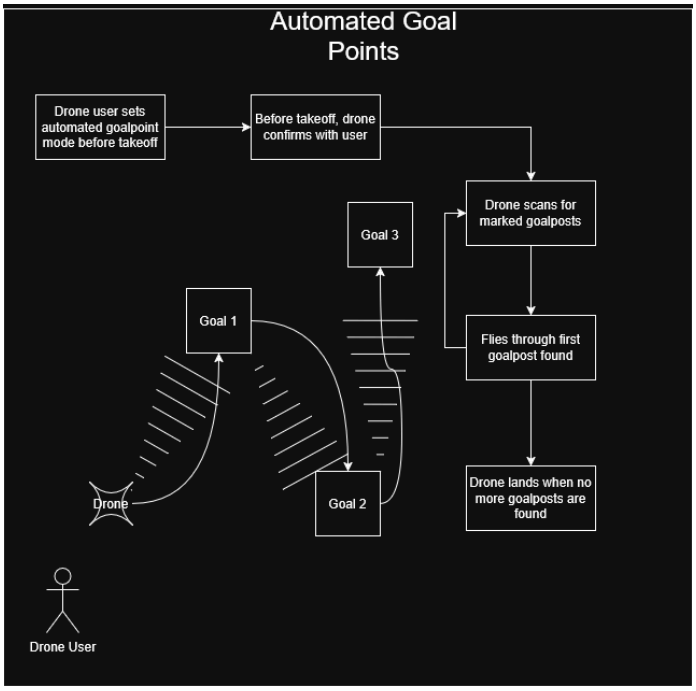
Manual Flight Test



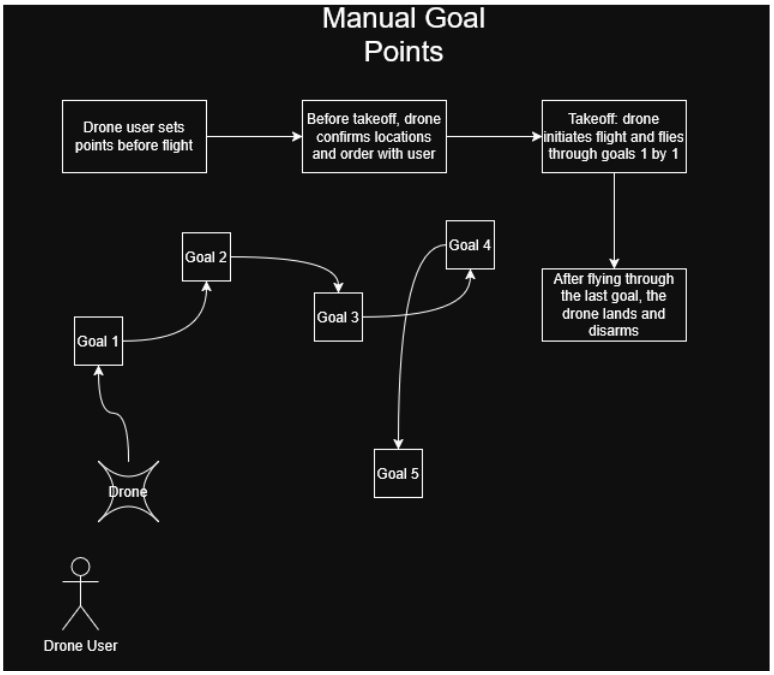
Drone Closeup/Flowchart Topics

Updated Use Case Scenarios

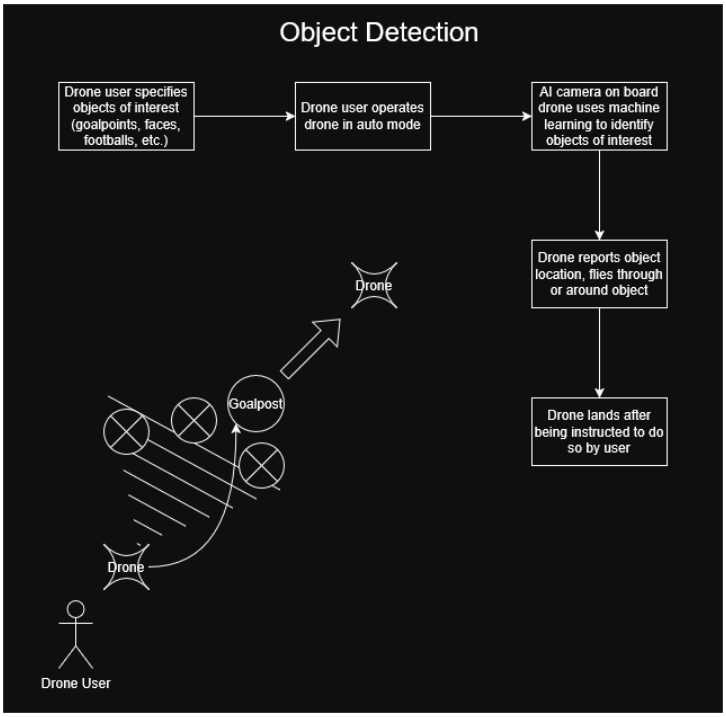
Automated Goal Point Setting and Traversal



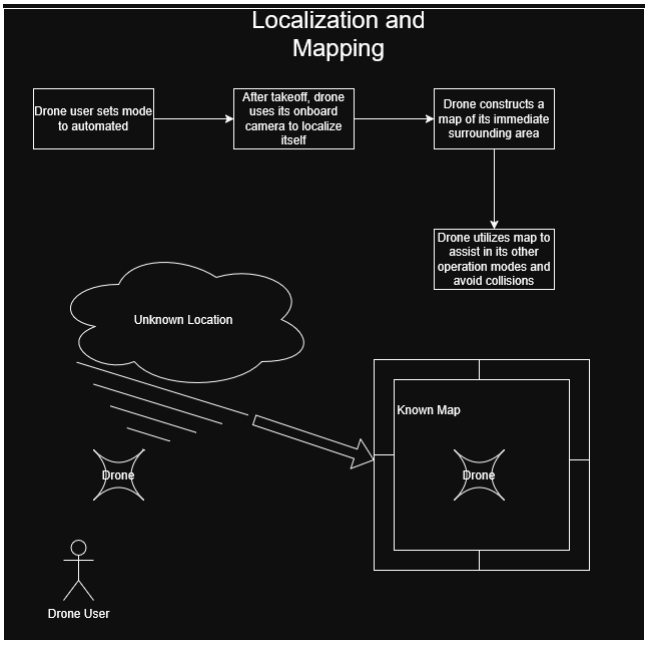
Manual Goal Point Setting and Traversal



Object Recognition



Localization and Mapping



Updated Timeline of TAsks and Planned WorkLoad Split for use case scenarios

Use case scenarios were greatly changed from our previous draft. More accurate updates have been made for the new use cases.

Use case scenarios: Workload Split

Manual Goal Point Setting **Engineer:** Isaiah, Aneri	Closest to being completed. 1-2 week completion timeline. Hardware is acquired, development depends on software development
Automated Goal Point Setting **Engineer:** Isaiah, Aneri, Jasera	2nd closest to being completed. 2-3 week completion timeline. Software development is the main issue, no hardware difficulties.
Localization and Mapping **Engineer:** Rohan	Least complete. 3 week completion goal. The transition to a more thoroughly documented camera/cv libraries should speed up completion.
Object Recognition **Engineer:** Derek	Similar timeline to automated goal point setting. Missing hardware but software is well documented which should aid the completion process.